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DOI: https://doi.org/10.1027/1015-5759/a000564

Multistudy Report

An Advanced Measure of Moral Sensitivity in Business

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Abstract: Moral sensitivity, understood as an individual's capability of identifying and ascribing importance to moral issues when they arise, is often considered a key competence in professional life and a precondition of ethical behavior. With a focus on business settings, this article presents a new measure to assess individual's sensitivity to moral and business values. The measure was developed using a vignette-based domain-specific approach and validated in two studies. In Study 1, we compared our instrument and various convergent and divergent scales to obtain the first evidence of the construct validity of the instrument. Study 2 provides evidence of criterion validity by comparing the sensitivity to moral and business-related issues between a sample of business managers/bankers and employees of non-governmental organizations (NGOs). The results demonstrate that business managers/bankers reveal lower scores of moral sensitivity than employees of NGOs. Further directions for moral sensitivity research and limitations are discussed.

Keywords: moral sensitivity, moral blindness, moral intelligence, ethics training, assessment

Recurring scandals in business and finance involving various forms of illegal and unethical conduct, such as fraud, bribery, and corruption, have brought many companies into disrepute (e.g., UBS and VW) or even ruined them (e.g., Enron and WorldCom). These scandals have also raised questions about the underlying conditions supporting misconduct and interest in possible interventions. As a consequence, organizations have invested a significant amount of time and money in control mechanisms that are meant to promote the compliance of managers and other employees with the codes of ethics of the respective organizations and the applicable laws. However, such efforts seem to disregard the fact that individuals may behave in contradiction to rules and ethical values (as often portrayed in the organization's codes of ethics) simply because they are *morally blind*, that is, insensitive or unattuned to moral matters when they arise in their daily work life (Pedersen, 2009).

Individuals can have morally good intentions but still behave unethically without being aware of it (Bazerman & Tenbrunsel, 2011; Gino & Bazerman, 2009). To better understand this phenomenon, behavioral ethics research focusing on *bounded ethicality* has predominately examined factors that promote ethical fading and hence moral blindness (Bazerman & Tenbrunsel, 2011; Treviño, Weaver, & Reynolds, 2006). As a consequence, *moral sensitivity* (MS) has emerged as an essential concept in research and practice alike. MS is defined as the capability of identifying and ascribing importance to moral dimensions when they arise (Jordan, 2009). It is considered to be a key competency in professional life and a prerequisite for meeting ethical challenges, although moral functioning encompasses additional competencies (Rest, 1986; Tanner & Christen, 2014).

Research and experience suggest that individuals differ in their MS (e.g., Gioia, 1992; Jordan, 2009; Tanner, 2009; Tanner, Medin, & Iliev, 2008), with some individuals being rather ignorant to moral dimensions in daily life, while others appear to be quite responsive. Such differences are seen to derive from prior individual experience, socialization, and learning, which render specific mental schemas more accessible than others. Researchers in moral psychology consistently conceive the activation and accessibility of moral schemas as a crucial condition for demonstrating MS in that moral schemas guide attention and information processing (Gioia, 1992; Jordan, 2007; Lapsley & Narvaez, 2005; Narvaez, 2010; Reynolds, 2008). For example, Jordan (2009) argues that business managers' business schemas are more dominant than their moral schemas, given that they have much more experience with business challenges such as maintaining profitability. Along these lines, business managers were found to be less likely to detect moral-related issues than business-related issues in

ambiguous vignettes in comparison with academics. Given the role of experience, socialization, and learning, it is obvious that MS is not a stable attribute or predisposition, but an ability that can at least partially be shaped and developed.

To assess MS, it is indispensable to have an appropriate instrument. There are several instruments that measure MS, which are mostly domain-specific (for comprehensive overviews, see Jordan, 2007; Miller, Rodgers, & Bingham, 2014). While existing approaches have delivered substantial scientific insights and methodological developments, they have several noteworthy shortcomings that reduce their functionality for the purposes of research, assessment, and training. First, most of them use a qualitative approach. There is no question that open-ended answer formats can provide relevant information, but the coding and scoring of the answers are time-consuming and therefore limited in effectiveness.

Second, there are also a few questionnaire-based measures that allow for easier and more efficient scoring, but they raise methodological concerns. MS is sometimes measured by directly asking respondents whether a situational description involves an ethical issue or by using "ethical" or "moral" in the wording of items (e.g., Reynolds, 2008). In doing so, they emphasize the possibility that the situation may contain a moral dimension. However, the participant might not have had considered this had the question not been asked (Tenbrunsel & Smith-Crowe, 2008), which makes such approaches susceptible to social desirability (Weber, 1992). Hence, it is not clear whether these instruments really assess MS (see Jordan, 2007; Tenbrunsel & Smith-Crowe, 2008, for critical reflections on previous measurements).

The present study addresses these concerns and limitations by developing a new measure and providing the first validation tests. We agree with other researchers that a domain-specific approach is more useful and informative in understanding how individuals approach real-life decision-making (Alexander & Becker, 1978; Jordan, 2009). Thus, we focus on the business domain (for an analogous attempt in the domain of medicine, see Ineichen, Christen, & Tanner, 2017). Given this focus, it is obvious that individuals are expected to account for business-related issues in addition to having sensitivity to moral issues. Therefore, our goal is to assess individuals' sensitivity to moral values in business settings, where business values matter and may even be more salient. We first propose a vignette-based measure that relates to moral and business values, provides hypothetical but realistic scenarios related to the business domain, and is efficient to score. Second, we present two validation studies with samples of students and professionals. We now continue by defining MS and describing the development of the instrument.

The Concept of Moral Sensitivity

Often referred to as moral awareness or ethical sensitivity/sensibility, MS is commonly understood as the ability to identify moral issues when they arise in practice and to ascribe importance to them (Jordan, 2009; Karcher, 1996; Shaub, 1989; Sparks & Hunt, 1998). MS includes being responsive to the needs of others and potential violations of standards or codes that govern professional conduct. It also involves being attuned to warning signals in situations that may indicate misconduct and being able to anticipate potential risks of actions for various stakeholders (Tanner & Christen, 2014). Therefore, MS is a necessary precursor for moral decision-making: without an initial recognition that a moral issue is at stake, there is no need to enter into subsequent moral judgment and decisional processes (Clarkeburn, 2002; Rest, 1986; Sparks & Hunt, 1998). However, only recognizing that a moral issue is at stake might not be enough. In accordance with other authors (e.g., Jordan, 2009; Sparks & Hunt, 1998), we propose that the operationalization of MS should incorporate both the *identification* and *ascription of importance* to moral issues.

Development of the Instrument

Although the relevance of MS is undisputed, it is obvious that responsiveness to business values (such as profitability) is of legitimate interest in the professional domain of business as well. Responsiveness to business values may even distract people from moral aspects or interfere with moral values. Given the relevance of both aspects, we developed a measure that assesses both MS and sensitivity to business values (BS).

The instrument is structured as follows: Participants are asked to imagine being a member of a company's task force and are told that the task force will meet to discuss some current problems of the organization, which are described in vignettes. They are then told to report which aspects may be relevant when deciding what action to take. After reading each vignette, participants are first asked to indicate which issues they consider relevant in the situation described by choosing from a set of value-related statements. Next, they are asked to indicate how important each of the chosen statements is by allocating points to them. A score for both MS and BS is calculated by building upon these two phases.

The construction of the instrument had three steps (each of them briefly described below): the selection of (1) values, (2) value statements, and (3) vignettes. The realization of these steps and associated pilot studies are extensively described by Christen, Ineichen, and Tanner (2014; who

also carried out an analogous analysis of relevant values in medicine by way of comparison) as well as Zehr (2013).

Step 1: Selection of Values

This step aimed at identifying which values are considered as core examples of moral and business values in the business context. Therefore, we created a list of 14 values that are perceived as relevant in the business context by building upon an extensive literature search and interviews with business experts. A pilot study with $N = 247$ participants was conducted to examine the categorization of the values. Of this sample, 68% were economic and finance students, and the rest were professionals (people working in the domain business or finance for at least 40% of their time). All participants were asked to rate each value on four different bipolar dimensions using 6-point scale: *moral vs. non-moral*, *cooperative vs. competitive*, *community-oriented vs. self-oriented*, and *principle-focused vs. consequentialist*. The latter scale was not used for further testing as it did not provide meaningful information in preliminary analyses (see Christen et al., 2014).

The classification of the 14 values was then analyzed using two similarity metrics and two classification methods for each of the dimensions. For the similarity metrics, we used the two complementary nonparametric tests Mann–Whitney and Kolmogorov–Smirnov (the first metrics has a higher power for rejecting the null hypothesis, and the second is more sensitive to the form of the distribution, e.g., bimodality). Considering the two classification methods, in the first method the results of both similarity metrics were used to assess if two values were considered to be in the same group (two values were considered to be in the same group if their ratings along one dimension did not significantly differ from each other, $ps > .05$). In the second classification method, the results of the two metrics were used to create a distance matrix that then has been clustered using an algorithm that requires no predefined specifications on cluster number and size (sequential superparamagnetic clustering; Ott, Kern, Steeb, & Stoop, 2005). As a result, three value groups were identified. Those groups were also confirmed in subsequent cluster and network analyses (for a detailed description of the analyses and results, see Christen et al., 2014).

Overall, the analyses revealed a clear moral cluster consisting of four typical moral values (fairness, loyalty, non-maleficence, and respect), a clear business cluster comprising four typical business values (profitability, performance, competition, and reputation), and a remaining cluster consisting of values that showed only modest affinity with either the moral or business cluster (integrity, transparency, engagement, and professionalism) (for more details, see Christen et al., 2014). Mann–Whitney tests revealed that students and professionals only differed in their ratings of three values: compared to the students, professionals treated engagement as more community-oriented; reputation as more non-moral, self-oriented, and competitive; and integrity as more cooperative ($ps < .05$).

Nevertheless, and more importantly, for both the students and the professionals, the same values belonged to the same three clusters. In line with this, the differences in ratings of all moral and non-moral values were very much lower between the students and professionals than the differences in ratings between the moral and non-moral values.

In the next step, we continued working with the values assigned to the moral and business category, while the values of the third group were dropped.

Step 2: Selection of Value Statements

Building upon these moral and business values, the aim of the next stage was to develop appropriate items (value statements) from which participants could indicate what values they consider to be at stake in the vignettes. This procedure was based on the proposition that individuals who are high in MS or BS would be more likely to identify underlying value-based similarities or dissimilarities between statements and vignettes (see Fialkov, Jackson, & Rabinowitz, 2014). One challenge in the process of designing these value statements was minimizing the risk of provoking socially desirable answers. Such risks may be more likely when the statements explicitly mention values such as fairness, honesty, and the like, or words like "moral" or "ethical." Therefore, we strictly avoided moral terms or naming the corresponding value in the wording of the value statements. Instead, for each value, we developed numerous examples of concrete behavioral value manifestations (e.g., one statement for the value fairness is "No one should be unjustifiably favored," while one for profitability is "Companies should always find new revenue opportunities.").

Using the same samples ($N = 247$) as mentioned above (see Step 1), we also examined the extent to which the proposed statements were perceived as representative of a specific moral or business value using ratings on a 6-point scale (1 = *not representative at all*, 6 = *very representative*). Our goal was to select only the value statements that were commonly perceived by students and professionals as being highly representative examples of a particular moral or business value. Only statements that revealed a mean score higher than $M = 4$ were selected. Thus, we obtained a pool of 16 moral and 11 business value statements. From this pool, we selected four moral- and four business-related statements that best matched the content of the particular scenario of each vignette (for examples of value statements, see Electronic Supplementary Material, ESM 1).

Step 3: Selection of Vignettes

The selection of vignettes involved collaboration with practitioners, with whom we developed 12 short vignettes comprising approximately 150 words each (for an example of a vignette, see ESM 1). Each vignette described a hypothetical but realistic conflict situation involving different stakeholders. A pretest was then carried out with university students from various disciplines ($N = 45$), who were invited to our computer laboratory. They were asked to evaluate each vignette's comprehensibility, realism, required level of expertise, and ambiguity in the sense that a situation involves roughly an equivalent magnitude of moral- and business-related issues. The ratings were based on a 5-point scale (1 = *not at all* and 5 = *very much so*). For a vignette to be selected, it had to receive high ratings on comprehensibility and realism (scores higher than $M = 3.5$) and a moderate rating on the required level of expertise (scores between $M = 2.0$ and $M = 3.5$).

In addition, a vignette had to have a moderate level of ambiguity. This means that the ratings had to be moderate (both scores should be lower than $M = 4.5$) in the extent to which it contains moral and business aspects (two items) but equivalent (mean scores should not significantly differ based on a *t*-test). Using these criteria, 6 out of 12 vignettes were selected, which completed the construction of the instrument.

Measuring Moral and Business Sensitivity

Participants completed tasks on a computer for the assessment of MS and BS. As outlined above, participants were asked to imagine that they were a member of a company's task force with the duty to review current problems of the organization and to report the aspects that are possibly relevant when deciding what actions to take next. Prior to reading the first vignette, we informed the participants that they would be fulfilling two tasks related to each vignette: a selection task and a weighing task. The participants completed a warm-up example to become familiar with the tasks and then started working through six conflict descriptions (vignettes) in random order.

In the selection task, the participants had to choose among eight value statements (four statements referring to moral values and four referring to business values in randomized order). For each statement, they were asked to indicate whether they consider the issue mentioned in the statement to be related to the problem they had just read by pressing a "yes" or "no" button. In the weighing task, participants only saw the statements that they had considered to be related to the vignette in the previous step. They were asked to indicate the importance of each statement by allocating a total of 10 points to the statements. This procedure was repeated for each vignette.

Building upon our definition of MS, participants' answers in the selection task were expected to provide information about their ability to recognize moral-related and business-related issues. Therefore, we counted the number of moral- or business-related statements. Participants' scores in the weighing task indicate how much importance they ascribe to moral- and business-related aspects. If more points are allocated to particular statements, they are considered to have greater importance.

We combined both scores to assess individuals' sensitivity to moral values (VS^M) and business values (VS^B) (see also Ineichen et al., 2017). The standardized equation for calculating the individual sensitivity to moral or business values is as follows:

$$VS^{M,B} = \frac{1}{N^V N^{M,B}} \sum_{i=1}^{N^V} n_i^{M,B} \times \frac{1}{N^V K} \sum_{i=1}^{N^V} k_i^{M,B},$$

VS^M and VS^B are the sensitivity to moral (M) and business (B) values, N^V is the number of presented vignettes, K is the total number of allocation points, and N^M and N^B are the numbers of M and B values presented to the participants. Finally, n_i^M and n_i^B are the number of values chosen per vignette i and value group, and k_i^M and k_i^B are the number of points allocated to moral and business values per vignette i; therefore, $k_i^M + k_i^S = K$.

As an example, consider $N^V = 6$, $K = 10$, and $N^M = 4$. Thus, the resulting sensitivity to moral values is:

$$VS^M = \frac{1}{24} \sum_{i=1}^{6} n_i^M \times \frac{1}{60} \sum_{i=1}^{6} k_i^M.$$

Applying this equation to MS and BS reveals scores between 0 and 1. Higher scores indicate a higher MS or a higher BS. The following two studies present the first tests of the measure's validity and reliability.

Study 1: Construct Validity

We attempted to establish the construct's validity in the early stage of instrument development, which was done by comparing our measure of MS and BS with other established measures of related or unrelated constructs. For MS, we expected positive correlations with theoretically related constructs, such as moral attentiveness, empathy, justice sensitivity, and communal values. Reynolds (2008) defined moral attentiveness as the extent to which individuals

actively and chronically search for moral elements in a situation. Reynolds' approach is understood as a trait measure, while our MS measure is more context-specific. Nevertheless, we expected moral attentiveness to have a moderately positive relation with MS.

In addition, MS is often seen as involving empathy (e.g., Narvaez, 2010), which is generally described as the ability to be responsive to the experience of others (Davis, 1980). Therefore, we expected a positive association between empathy and our MS measure. Furthermore, we expected a positive association between MS and justice sensitivity, which is the extent to which somebody is responsive to an observed injustice. The reason is that both concepts involve sensitivity to moral values. Finally, communal values are portrayed as reflecting peoples' striving to establish and maintain social relationships (Trapnell & Paulhus, 2012). We also hypothesized that there would be positive correlations between communal values and MS since they both share the appreciation of concern for others and moral values.

In contrast, for BS, we expected positive associations with Machiavellianism and agentic values. Machiavellianism is characterized by calculated manipulation to achieve personal goals while disregarding moral issues (Ulbrich-Herrmann, 2014), so we expected individuals who are high in Machiavellianism to be more sensitive toward business values. Similarly, people pursuing agentic goals (the contra-concept of communal values) have been shown to ascribe more importance to power, success, and economical aspects (Trapnell & Paulhus, 2012), so we expected such people to pay more attention to business-related issues.

We generally assumed that constructs that have a positive correlation with BS to correlate negatively with MS, and vice versa. Nevertheless, all related scales assess the constructs on a more general level, while our measure operates on a context-specific level. Hence, given this lack of correspondence (Ajzen, 1988), we can expect only moderate correlations between MS or BS and the other constructs.

We also assessed social desirability to add to the process of confirming divergent validity. Social desirability is defined as the tendency to attribute socially desirable characteristics and values to oneself and to reject socially undesirable ones (Helmes & Holden, 2003). Our instrument is intended to measure value sensitivity for MS and BS independently of social norms and expectations, so, ideally, there should be no connection between these constructs.

To provide further evidence for the validity of our measure, we also added a vignette-related word assignment task. In this task, participants were provided with various moral- and business-related words on a computer and asked to respond as quickly as possible in regard to whether the words relate to the vignette or not. We hypothesized that this measure would at least modestly and positively correlate with the more deliberately based explicit measure of MS and BS since both measures somewhat reflect individuals' greater or lower accessibility of moral or business value concepts (Jordan, 2007; Lapsley & Narvaez, 2005; Reynolds, 2008).

Method

Participants and Procedure

Data were collected from students in various disciplinary fields (N = 108) (for the dataset, see ESM 2). For the word assignment task, data from 10 participants had to be excluded due to inaccurate response patterns, resulting in a sample of N = 98. For the complete sample, the mean age was M = 23.71 years (SD = 5.02), 56.5% were women, 60.2% were business and economics students (the remainder were from other fields), and their mean duration of study was M = 4.95 semesters (SD = 3.31). Furthermore, 62.9% worked at least part time, and 46.3% had working experience in the financial or business domain. The participants were invited to our laboratory twice, and both sessions were 7–10 days apart. In each session, participants were provided with a different set of vignettes and measures of related concepts and received a monetary compensation of 50 CHF for their participation.

Measures were administered on a computer using Qualtrics software. In session 1, the participants completed a few demographic questions and then were randomly assigned to 1 of 4 groups corresponding to different combinations of vignettes and blocks of theoretically related constructs (see Table 1). For example, group 1 started working through our MS and BS measure using vignettes 1–3, filled out several questionnaires assessing related constructs (Related Construct Block 1), and then worked through the word assignment task (Word Assignment) using another set comprising vignettes 4–6. Subsequent group comparisons between groups 1 and 4 revealed that these task variations had no effects on MS or BS results.

Convergent and Divergent Validity Measures

The following measures of theoretically related constructs were included and assigned to block 1 or block 2 (see Table 1). First, *moral attentiveness* was measured using Reynolds' (2008) scale, which consists of two subscales; the 7-item perceptual moral attentiveness subscale (e.g., "On a typical day, I face several ethical dilemmas") and the 5-item reflective moral attentiveness subscale (e.g., "I regularly think about the ethical implications of my decisions"). Items were rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). *Empathy* was measured using the 16-item Saarbrueck Personality Questionnaire for Empathy (Paulus, 2009), which is a German translation of the Interpersonal Reactivity Index (Davis, 1980). It consists of four subscales

Table 1. Overview of variations of tasks

Group	Tasks in Session 1			Tasks in Session 2		
1	MS, BS Vignette 1–3	Related Constructs Block 1	Word Assignment Vignette 4–6	MS, BS Vignette 4–6	Related Constructs Block 2	Word Assignment Vignette 1–3
2	Word Assignment Vignette 4–6	Related Constructs Block 1	MS, BS Vignette 1–3	Word Assignment Vignette 1–3	Related Constructs Block 2	MS, BS Vignette 4–6
3	MS, BS Vignette 4–6	Related Constructs Block 1	Word Assignment Vignette 1–3	MS, BS Vignette 1–3	Related Constructs Block 2	Word Assignment Vignette 4–6
4	Word Assignment Vignette 1–3	Related Constructs Block 1	MS, BS Vignette 4–6	Word Assignment Vignette 4–6	Related Constructs Block 2	MS, BS Vignette 1–3

Notes. MS, BS = our new measure for assessing moral and business sensitivity; Word Assignment = vignette-related word assignment task; Related Construct Block 1 = Scale to Machiavellianism, Saarbrueck Personality Questionnaire for Empathy, Questionnaire for Justice Sensitivity; Related Construct Block 2 = Scales to Agentic and Communal Values, Moral Attentiveness, Social Desirability.

(4 items per subscale): perspective taking (e.g., "I try to look at everybody's side of a disagreement before I make a decision"), empathic concern (e.g., "I would describe myself as a pretty soft-hearted person"), fantasy (e.g., "I really get involved with the feelings of the characters in a novel"), and personal distress (e.g., "I sometimes feel helpless when I am in the middle of a very emotional situation"). Items were rated on a 5-point scale (1 = *never*, 5 = *always*).

Justice sensitivity was measured using the eight-item instrument developed by Beierlein, Baumert, Schmitt, and Kemper (2013). It consists of four subscales (2 items per subscale): victim sensitivity (e.g., "It concerns me when others undeservedly do less well than I do"), beneficiary sensitivity (e.g., "I feel guilty when I do better than others undeservingly"), observer sensitivity (e.g., "I feel outraged when someone does better than others undeservedly"), and perpetrator sensitivity (e.g., "I feel guilty when I enrich myself at someone's expense"). Items were rated on a 6-point scale (1 = *strongly disagree*, 6 = *strongly agree*).

People's propensity toward *Machiavellianism* was assessed using a 14-item scale (Ulbrich-Herrmann, 2014). A sample item is "Modesty is not only is useless but also harmful." Items were rated on a 4-point scale (1 = *strongly disagree*, 4 = *strongly agree*). *Agentic* and *communal values* were measured using the scale by Trapnell and Paulhus (2012). The scale was administered to assess people's importance of agentic values (six items, such as "competence," "achievement," or "power") and communal values (6-items, such as "honesty," "forgiveness," and "compassion") (see also Abele, 2014). Participants rated the items on a 9-point scale (1 = *not important to me*, 9 = *highly important to me*). *Social desirability* was measured using Stöber's (2001) 16-item measure to assess individual's tendencies for socially desired answer patterns (e.g., "Sometimes I litter"). Participants answered with 0 = *false* or 1 = *true*.

Vignette-Related Word Assignment Task

In this task, after each vignette, participants were shown 24 words in random order and asked to indicate whether "this word relates to the vignette" (by pressing the *j* button) or that "this word does not relate to the vignette" (by pressing the *f* button). Participants were told that they had only a very short time frame to respond. After reading each vignette, participants saw a cross (+) in the middle of the computer screen for 800 ms, followed by an empty screen for 400 ms before a stimulus was presented. We assumed that implementing time pressure would make it harder for participants to reflect upon their decisions. Thus, we expected that the results from this task would be less affected by self-presentational concerns and social desirability (Fazio & Olson, 2003).

Stimuli words were carefully tested and selected in a pilot study with $N = 107$ participants (for details about the procedure and selection of the stimuli, see Schmocker, 2015). Overall, the stimuli consisted of moral-related words (such as "fairness" and "respect"), business-related words (such as "profit," "competition," or "yield"), other vignette-related words (but not moral- or business-related) and non-related filler words (e.g., "website").

The answer was coded as 1 when participants answered that the word was related to the vignette and as 0 otherwise. Two dependent variables were created by calculating the means of recognized moral-related word across the answers and business-related words. As stated above, confirming that more moral or business-related words are related to the vignette is suggested to be indicative of the accessibility of one's dominant schema.

Results

Table 2 reports the means, standard deviations, reliabilities, and Spearman's correlations between the value-sensitivity components (MS and BS) and the other measures. Descriptive statistics were calculated across all six vignettes (for single-vignette analyses, see ESM 3). The internal consistency reliabilities were acceptable for MS ($\alpha = .70$) but were not fully satisfactory for BS ($\alpha = .54$). The pattern of the correlations, however, generally conformed to most of our expectations. As mentioned, we expected only modest

Table 2. Means (*M*), standard deviations (*SD*), reliabilities (α), and correlations among moral and business sensitivity and the other constructs

				Sensitivity measure	
Variables	*M*	*SD*	α	Moral sensitivity	Business sensitivity
Sensitivity measure					
Moral sensitivity	0.32	0.16	.70	–	−.28**
Business sensitivity	0.25	0.13	.54	−.28**	–
Word assignment task					
Moral sensitivity	0.49	0.26	.89	.35**	.11
Business sensitivity	0.47	0.24	.89	.32**	.27**
Moral attentiveness scale	5.09	1.71	–	.30**	−.24*
Perceptual moral attentiveness	2.38	0.84	.88	.29**	−.17†
Reflexive moral attentiveness	2.71	1.01	.87	.27*	−.27*
Saarbrueck Personality Questionnaire					
Perspective taking	14.91	2.68	.74	.05	−.06
Empathic concern	13.88	2.64	.68	.18†	−.18†
Fantasy	13.72	3.13	.75	.04	−.09
Personal distress	10.20	2.67	.60	.14	−.18†
Justice sensitivity					
Victim sensitivity	3.79	1.14	.57	.04	−.06
Beneficiary sensitivity	2.99	1.28	.78	.31**	−.16†
Observer sensitivity	3.74	1.12	.69	.24*	−.13
Perpetrator sensitivity	4.54	1.19	.64	.22*	−.13
Machiavellianism	2.09	0.42	.75	−.11	.25**
Agentic and Communal values					
Agentic values	4.15	1.06	.73	−.08	.23*
Communal values	5.28	0.79	.54	.29**	−.14
A–C values differences	−1.12	1.42	–	−.21*	.26**
Social desirability	22.10	3.02	.66	.02	.03
Sociodemographics					
Age	23.71	5.02	–	.15	−.09
Gender	1.41	0.50	–	−.06	.07
Work experience in finance	0.49	0.50	–	.06	.18†

Notes. $N = 98$ for correlations with word assignment task, for others $N = 102–108$. Spearman rank order correlations are presented. Gender coding: male = 1, female = 2. Coding for work experience in finance: no = 0, yes = 1. †$p < .10$; *$p < .05$; **$p < .01$.

correlations since MS, BS, and the related measures assess the constructs on varying levels of context specificity (Ajzen, 1988).

As expected, we found modest but significantly positive correlations between MS and moral attentiveness, several scales related to empathy or justice sensitivity, and communal values. In contrast, BS correlated with most measures negatively, but positively with Machiavellianism and agentic values. In addition, BS correlated significantly with the results of the BS word assignment task, but not with the results of the MS word assignment task. The exception is that MS correlated significantly with both the BS and the MS word assignment measure.

As anticipated, neither MS nor BS correlated significantly with social desirability. However, BS correlated marginally with work experience in the business and finance domain; that is, participants with work experience in those fields tended to be more sensitive to business values. This finding corresponds with those of other studies (e.g., Jordan, 2009). Taken together, the patterns of correlations between our measure and all other scales tend to provide preliminary evidence of our measure's construct validity.

Study 2: Group Comparison

The objective of Study 2 was to obtain evidence of criterion validity. The study was designed to compare between two contrasting groups: employees of non-governmental organizations (NGOs) and business managers/bankers.

Schemas are developed through socialization, direct learning experiences, and observations. Individuals working in the business and finance domain are more likely to have business training and to be rewarded for attaining financial and shareholder goals (Gioia, 1992; Sundaram & Inkpen, 2004; Treviño & Brown, 2004). Thus, we expected that

they would be more sensitive to business-related issues than to moral issues. On the other hand, one distinctive feature of NGOs is that they highlight the relevance of ethically related topics, such as stakeholder concerns, human rights, sustainability, and responsibility toward future generations. However, since NGOs also face organizational and financial challenges, we expected that NGO staff would attend to business-related issues as well.

Jordan (2009) provided evidence that business managers show less awareness toward moral-related issues than academics. We expected to find analogous group differences in our sample. We hypothesized that business managers and bankers would demonstrate lower levels of MS than employees of NGOs in a group comparison.

Method

Participants and Procedure

Employees of multiple NGOs in Switzerland (n_1 = 34) as well as business managers and bankers (n_2 = 61) participated in this study (see dataset in ESM 2). The mean age of the NGO employees was M = 43.6 years (SD = 12.73), and 19 members of this group were male (55.9%). The mean age of the business and finance representatives was M = 40.48 years (SD = 7.46), and 45 were male (73.8%). The business managers were students from an executive MBA program (n_{2a} = 37), and the bankers were employees of a major Swiss bank (n_{2b} = 24). We found no differences between the two business groups, so we report only the results referring to the combined business group.

Procedure and Measures

Participants completed an online survey by following a link that was sent to them via e-mail. After answering some demographic questions, they were presented with a randomized selection of the six vignettes of the moral and business sensitivity measure.

Results

MS and BS were calculated using the equation explained above (for single-vignette analyses, see ESM 3). The findings revealed acceptable internal consistency of MS (α = .81) and BS (α = .78). Due to unequal variances, a Welch's test was used for group comparisons. As expected, the analyses revealed that business managers and bankers (M = 0.32, SD = 0.14) demonstrated significantly lower MS scores than the employees of the NGOs (M = 0.46, SD = 0.23), $F(46.63) = 10.97$, p = .002. However, the two groups did not differ in their sensitivity to business-related issues, $F(67.42) = 1.78$, p = .187: the representatives of the business group (M = 0.29, SD = 0.17) demonstrated similar BS scores as the employees of the NGOs (M = 0.24, SD = 0.17). Overall, these results provide evidence of the criterion validity of the measure, given its capability to discriminate between the two groups in terms of MS, which was the variable of interest.

Discussion

Previous measures of MS have raised various methodological concerns (Jordan, 2009; Tenbrunsel & Smith-Crowe, 2008). Their findings must be treated with caution, for example, because these measures may directly influence people to perceive an ethical dimension in the problem description, making them more susceptible to social desirability. Motivated by these concerns, the purpose of this research was to develop and test a new measure of moral sensitivity. For this purpose, a vignette-based instrument for the business context was developed that presents people with scenarios and asks them to identify (from a given list) the major issues that they would consider before deciding.

We first developed several vignettes and value statements. This material was then tested in two pilot studies and revised based on the findings. Our final measure now consists of six vignettes and accompanying value statements. Two additional studies were designed to examine the validity of the new measure. Overall, the studies provide preliminary evidence of the construct and criterion validity of our new measure.

Using data from a heterogeneous Swiss student sample, Study 1 revealed that MS and BS correlated modestly but significantly with several selected convergent scales in expected ways. In a majority of cases, we found that the constructs correlating positively with MS correlated negatively with BS and vice versa. As expected, no significant associations with social desirability were found.

Our expectations were only partly met regarding the 0correlations between the word assignment task and the MS and BS. While BS correlated positively with the BS word assignment task, no significant correlation with the MS word assignment task was found. On the other hand, MS correlated with both the MS and BS word assignment tasks. This is somewhat surprising since the correlations between BS and the other scales mostly confirmed our predictions. Although we designed the word assignment task very carefully, it clearly does not represent a validated measure. Its value for examining the validity of the moral and business sensitivity measure may therefore be limited.

Given that it is usually rather difficult to gain access to practitioners, one strength of Study 2 is that we were able to collect data from employees of NGOs, as well as from the business and finance domain. Although the samples sizes were small, we found sound evidence that the measure has the capacity to distinguish between groups in expected ways.

As hypothesized, business managers and bankers revealed lower levels of MS than employees of NGOs on average.

Overall, the results of Studies 1 and 2 provide first evidence of the construct and criterion validity of the moral and business sensitivity measure. Nonetheless, further research is needed. In Study 1, some hypothesized correlations were not found. For example, we falsely expected that MS in our measure would correlate significantly with more components of the Saarbrueck Personality Questionnaire. Furthermore, the partially low internal consistency estimates of the BS measure in Study 1 suggest that further improvements of the measure may be needed.

In order to provide further tests of validity, more group comparisons could be useful. For example, participants with and without previous ethics training could be assessed. In addition, in a future step, we could also combine the selection and weighing task, such as by directly asking people to distribute a specific amount of points to the issues they consider as important in this problem. Such a procedure would allow for factor analyses to further assess the measure's construct validity and to examine a reduction of items.

Aside from the further validations, we believe that we have developed a solid basis for the further development of a measure for MS and BS. Given the relevance of counteracting moral blindness in organizations and financial institutions, a sophisticated measure appears to be essential for research and practice alike. Building upon further improvements of the instrument, this measure may open new doors for research to enhance our understanding of the antecedents and consequences of MS. For example, it can provide important information on how MS is affected by the impact of various working contexts, the duration of employment, and the organizational culture. Furthermore, the measure could be used to examine the success of education, ethics training, or interventions strategies.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1027/1015-5759/a000564

ESM 1. Example of vignette and value statement
ESM 2. Data set and outputs of Studies 1 and 2
ESM 3. Single-vignette analyses

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History
Received February 12, 2019
Revision received July 18, 2019
Accepted August 2, 2019
Published online December 2, 2019
EJPA Section/ Category I/O Psychology

Acknowledgment
We would like to thank Fabian Lienhard, Manuel Zehr, Anna Eckardt, Priyatharsan Yoganathan, Jaël Borek, and Lukas Posselt for their help in carrying out the studies.

Funding
This research was supported by grants from the Swiss National Science Foundation (CR11I1-159279/1), Stiftung für wissenschaftliche Forschung an der Universität Zürich, Stiftung Biäsch zur Förderung der Angewandten Psychologie, and Karl Schlecht Stiftung.

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